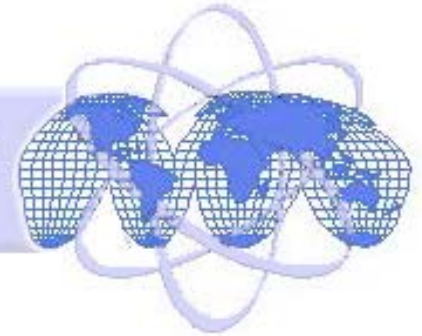


Atoms for Peace After 50 Years: New Challenges and Opportunities



A Strategic Planning Approach:

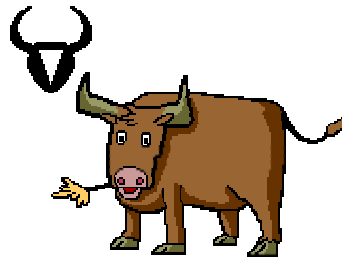


Vic Reis
reisv@saic.com

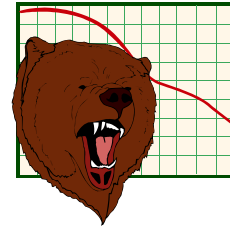
April 8, 2003

CGSR Workshop Participant Categories

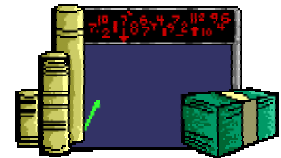
Nuclear "Bulls"



Nuclear "Bears"



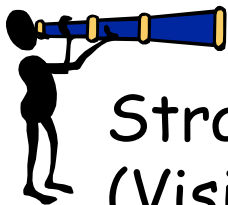
Nuclear "Index Funds"



Nuclear Owls

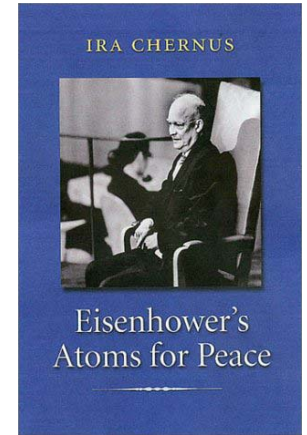


Strategic Planners



Strategic Planning: Define the future world you want, (Vision) and describe the role (and risks) for nuclear technology in reaching that world.

President Eisenhower
Atoms for Peace
Speech to the
United Nations
December 8, 1953



Vision: {

- Avoid Nuclear War
- Contain Soviet Expansion
- Avoid Massive Military Spending (Deficits)

Approach:

- International Control Nuclear Materials
- Nuclear Assistance
- Nuclear Arms Control
- Nuclear "new look" for military

Diplomacy/ Nuclear Technology/ National Security

Did Atoms for Peace Succeed?



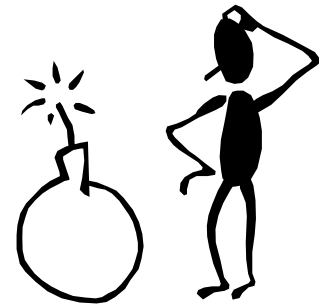
The broadest goals of were achieved:



- No nuclear (or major) war
- Containment of Soviets
- Lots of nuclear power, technology
- International Treaties e.g. NPT
- International Organization e.g., IAEA.

Some important specifics were not:

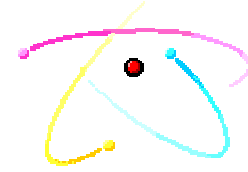
- U.S./USSR nuclear arms race
- Some proliferation



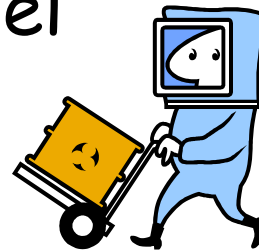
A vision not a blueprint!

Where are we now?

Some Current Major Issues:



- National Security
- Energy/Electricity distribution
- Environment
- Nuclear Spent Fuel



National Security Situation in 2003

Russia no longer
enemy



Terrorism



Rogue
States

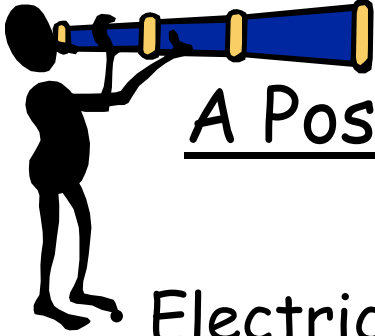


With WMD



Regional
Conflicts





A Possible 2003 Vision (50 years)

Electricity: Plentiful, Safe, Affordable, Carbon Free

- International Security



No Rogue States

"No" international terrorism

Regional Conflicts "settled"

Russia, China - not threats



- International Relations (Stability)

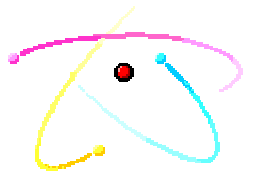
Extensive Trade

Fuel Cycle Standards (safety, nonproliferation...)

Carbon Emission Standards



Some Nuclear Contributions to the Vision



1. Develop a lot of nuclear power to make a significant contribution to energy supply and environment.



2. Maintain nuclear deterrence (no major war)



3. Eliminate (minimize) excess nuclear weapons, nuclear material, & separated Pu & spent fuel.

4. Provide source of significant international cooperation:
R&D, Safety & Proliferation Standards,
Spent fuel, Arms Control,



U.S. - Russian Collaboration

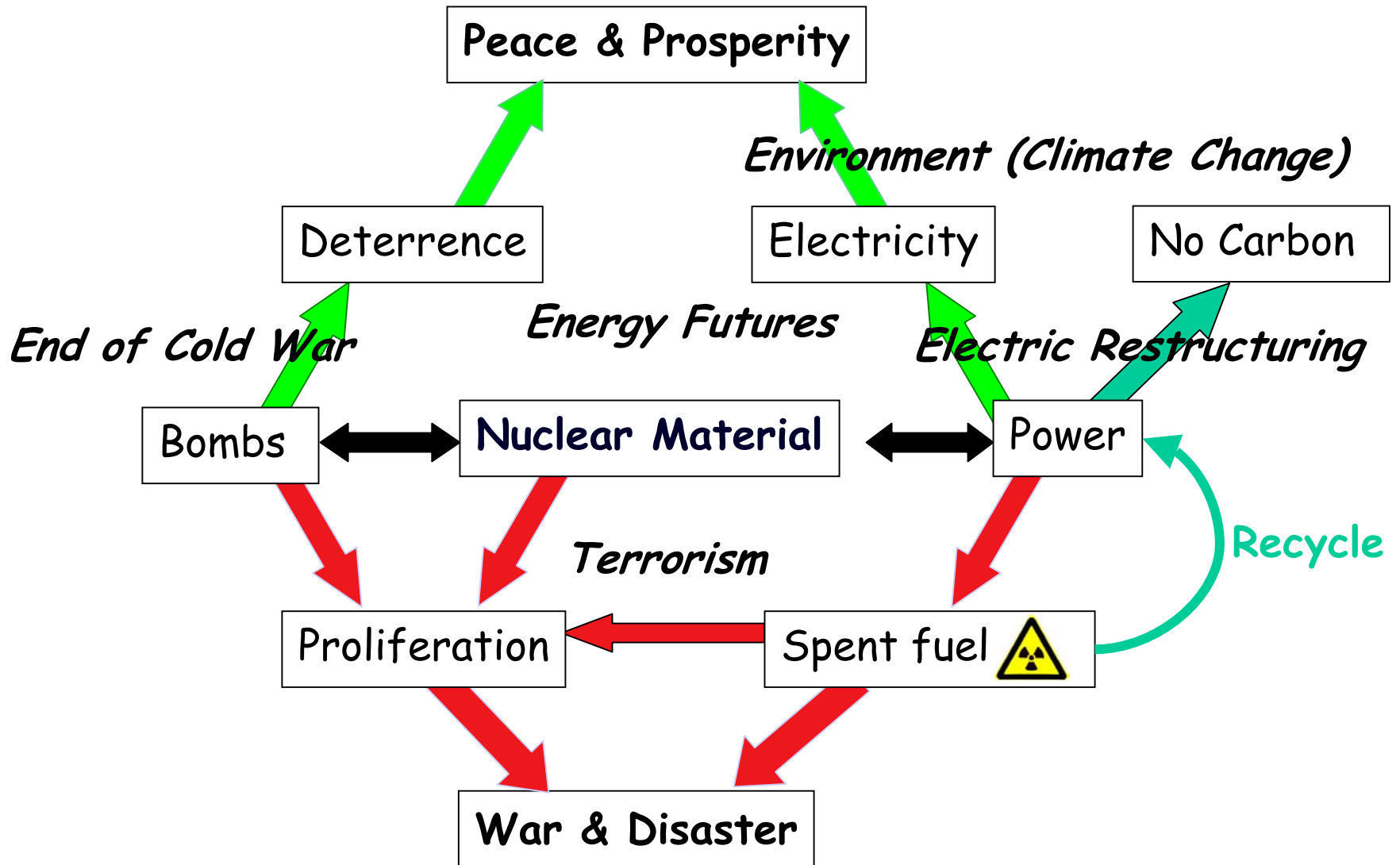
Presidents Bush & Putin

July 2002



"The two governments see promise in advanced nuclear reactor and nuclear fuel technologies which would reduce significantly the volume of waste produced by civilian nuclear reactors, would be highly proliferation-resistant and could be used in the future to reduce stocks of excess weapons-grade plutonium and other dangerous nuclear materials."

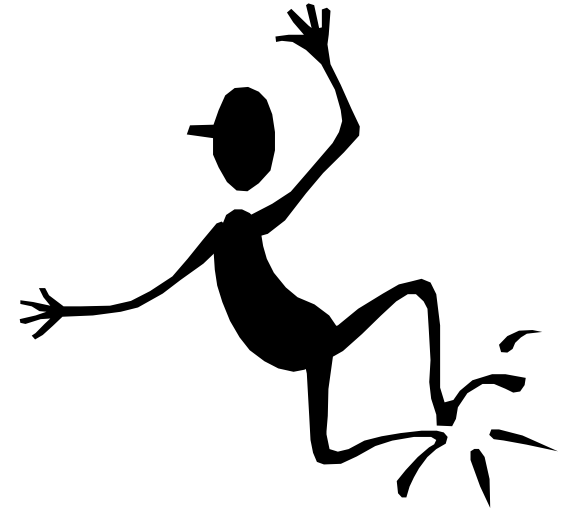
Global Nuclear System:



Good thing can happen - at large scale

U.S. Cigarette Smoking

Women in Physics



A vision without action is a dream,
Action without vision is a nightmare

Japanese Proverb

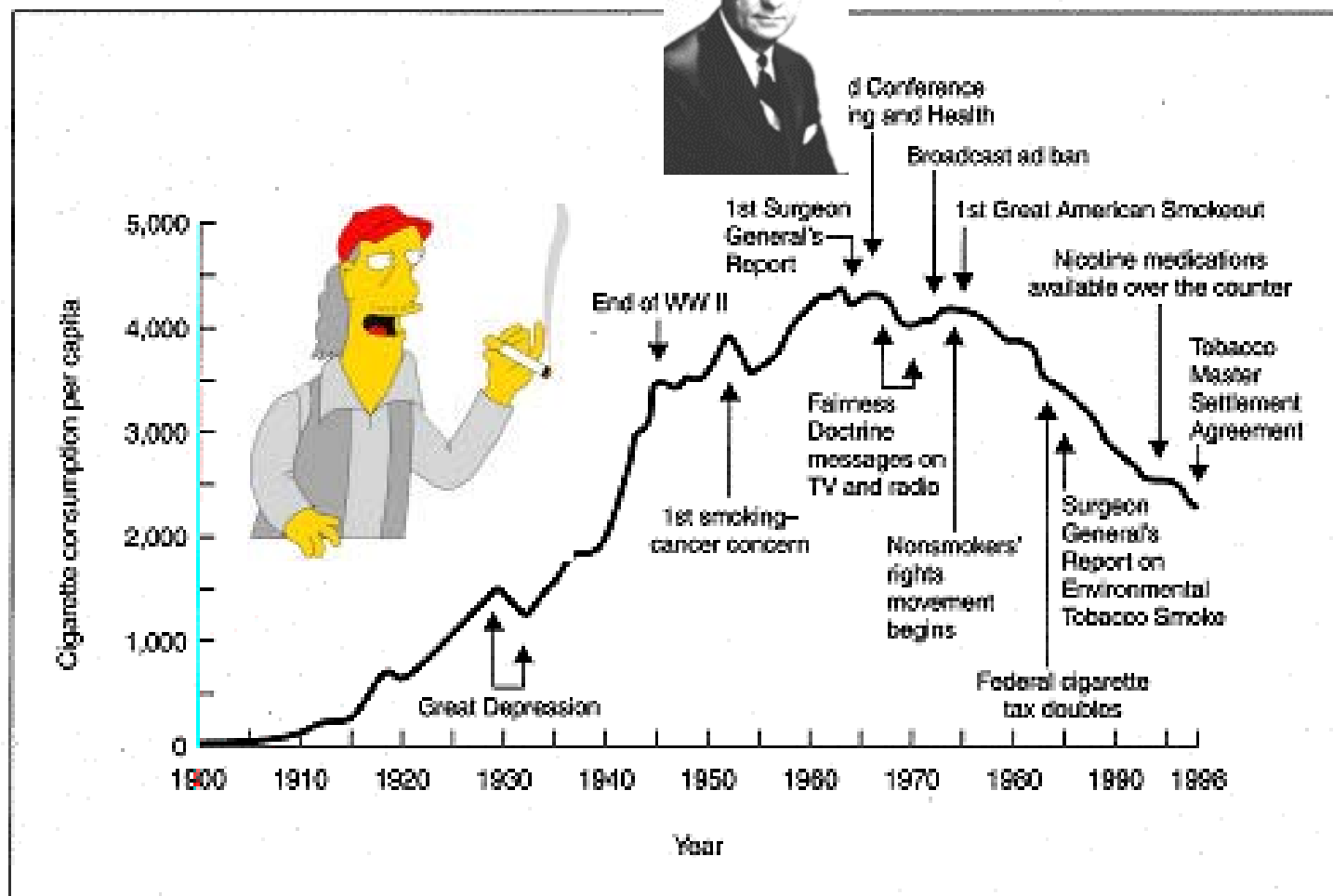
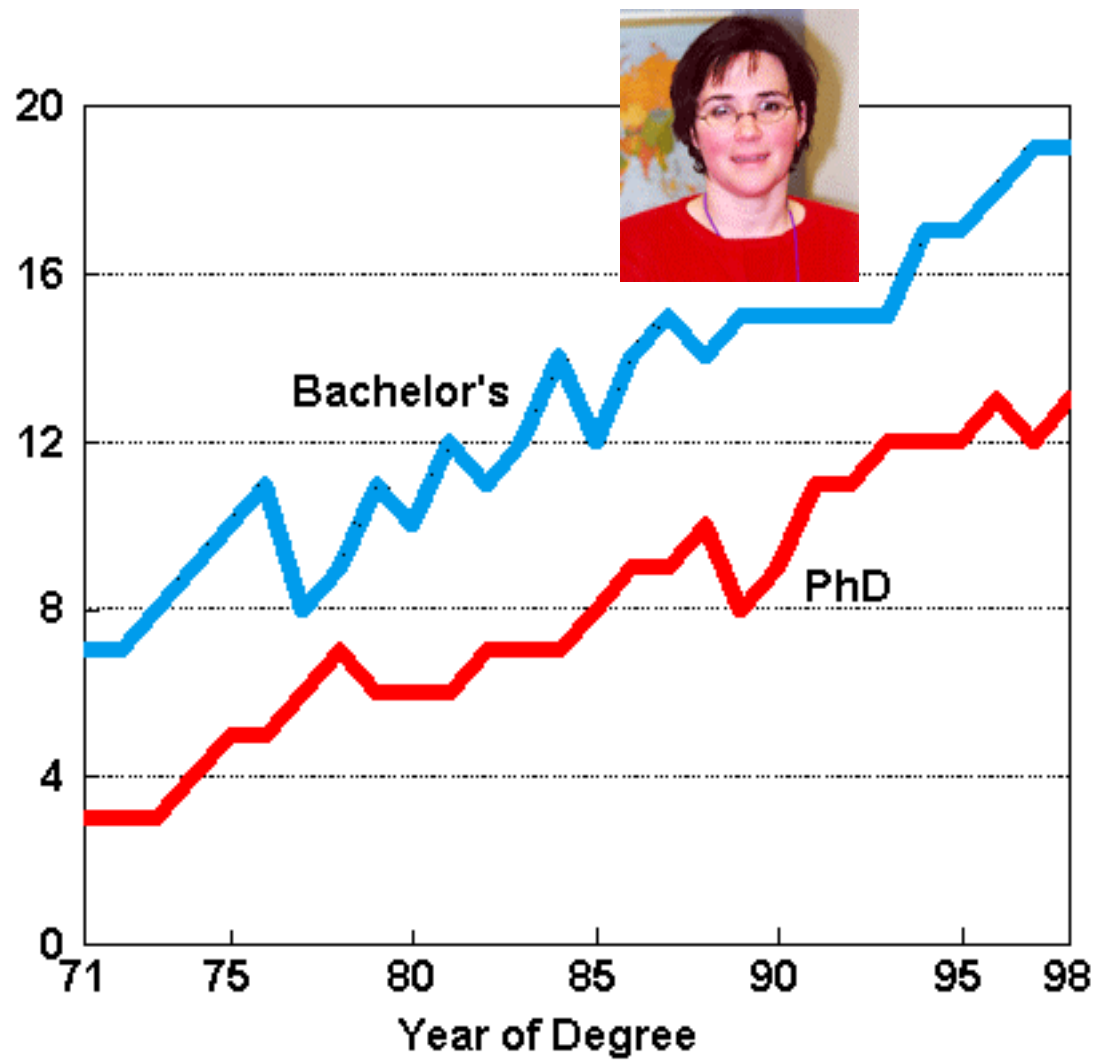


Figure 1: Annual Adult per Capita Cigarette Consumption and Major Smoking and Health Events—United States, 1990-1998—Source of data: US Department of Agriculture, 1986 Surgeon General's Report.

Source: Oncology Vol 13No.12 December 1999



Percent of Physics Bachelor's and PhDs Earned by Women, 1971 - 1998.